**Dimensional Analysis Ws #1 –** Perform the following conversions on a separate piece of paper

1. How many seconds (s) are in 8 hours (h)?
2. How many fluid ounces are in 10.0 gallons?
3. How many meters are in 5.67 feet?
4. How many seconds old are? (round your age to your nearest bday)
5. The mass of a Frisbee is 4,41 ounces. What is the Frisbee’s mass in grams?
6. A regular aspirin tablet contains 5.0 grains of aspirin. How many grams are in one tablet? 1 grain equals 1/7000 lb.
7. Mr. Focht weighs a muscular 165 pounds. What is his weight in milligrams?
8. The directions for an experiment ask each student to measure 1.84g of Copper wire. The only copper wire available is a spool with a mass of 50.0g. How many students can do the experiment before the copper runs out?
9. Popcorn is sold by the pound. If the average mass of a popcorn kernel is 0.125g, how many kernels would be in a 1.0 pound bag?
10. In a recent year, a quality of 18.4 billion pounds of phosphoric acid was manufactured in the United States for use in fertilizer. The cost of this acid averaged $318.00 per ton. What was the total value of the phosphoric acid produced? What was its cost per kilogram?
11. A 100.0 meter dash is how many yards long?
12. A sumo wrestler weighed 488 pounds when he won Japan’s most prestigious sumo championship. What was his weight in kilograms?
13. A new technique for generating ultrathin light beams may make it possible to do light microscopy with resolution on a molecular scale. If the beam of light is 1.0 nm across, what is the width in inches?
14. How many fluid ounces are in 5 gallons?
15. How many milliliters are in 5 gallons?
16. Each year in the U.S., approximately 200 million used auto and truck tires are discarded. If each tire weighs an average of 30 pounds what is the mass of the tires in kilograms?
17. The unaided eye can perceive objects which have a diameter of 0.1mm. Express this value in inches.
18. Determine the number of cubic centimeters in one cubic inch.
19. What is the volume, in cubic centimeters, of a cube that is 150.00 mm long per edge?
20. A rectangular box is 5.00in x 8.00in x 6.0in. Find the volume of the box in liters.
21. A silver dollar weighs about 0.943 ounces. Express this weight in milligrams.
22. What would a speed of 55 miles per hour be in meters per second?
23. Carl Lewis, a sprinter in the 1988 Olympic games, ran the 100 meter dash in 9.92 seconds. What was his speed in feet per second?
24. The speed of sound in air at room temperature is 343m/s. What is the speed in miles per hour?
25. If an automobile has a top speed of 140.0 mph, what is the speed in kilometers per second?
26. The density of aluminum is 2.70g/cm3. What is the density in kg/m3?
27. Calculate the number of liters in one cubic meter.
28. Cholesterol in blood is measured in mg of cholesterol per dl of blood. If the unit of measurement were changed to g cholesterol/ml of blood, what would a cholesterol reading of 185 translate too.